

Supervision of Physical Therapist Assistants: Analysis of State Regulations

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Executive Summary

Supervision of Physical Therapist Assistants:

Analysis of State Regulations

Medicare conditions of coverage regulations require that physical therapists (PTs) in private practice maintain a “personal” level of supervision of physical therapist assistants (PTAs), when PTAs furnish therapy services to Medicare beneficiaries. As current regulations explain, a “personal” level requires the supervising PT to be “in the room” when PTAs furnish services. This report is intended to provide information and analyses to the Centers for Medicare and Medicaid Services (CMS) as it reviews its policies on PTA supervision.

Physical therapists provide evaluative and rehabilitative services to patients with physical impairments, functional limitations, disabilities, or changes in physical function and health status resulting from injury, disease, or other causes. PTs assess joint motion, muscle strength and endurance, heart and lung function, and performance of activities required in daily living, among other responsibilities. Common treatment interventions include therapeutic exercise (such as strengthening and mobility exercises), customization and training in the use of prosthetic devices and equipment, wound management, cardiovascular endurance training, and training in activities of daily living.

PTAs are skilled health care providers who work under the direction and supervision of PTs. Frequently, PTAs implement designated therapies in patient treatment plans formulated by PTs. For example, PTAs often train patients in exercises outlined by PTs, provide basic wound care, engage in data collection activities, and report to PTs on patient performance and responses. PTAs are not trained nor permitted to perform patient evaluations or design treatment plans.

Our analyses of 1999 national workforce estimates indicate a total of roughly 105,000 to 108,000 PTs and 28,000 to 36,000 PTAs in the US, resulting in rates of 39 to 40 PTs per 100,000 population and 12 to 13 PTAs per 100,000 population. Our trend analyses suggest that the PT rate and PTA rate increased an average of 5.1% and 4.2% per year, respectively, since 1980.

PT and PTA educational and professional differences

PT and PTA education programs

While both PT and PTA education programs prepare graduates to provide basic physical therapy services, such as range of motion exercises, PT education programs train students in more complex therapy interventions and in physical therapy activities that are more analytic and evaluative in nature. These activities include patient screening, evaluation, diagnosis for physical therapy, prognosis, and care plan design. Recognizing these distinctions, the Commission on Accreditation in Physical Therapy Education (CAPTE), in conjunction with the American Physical Therapy Association (APTA), established academic requirements and guidelines that correlate to PT and PTA technical skill expectations.

As of 2002, a master's degree in physical therapy (MPT) is the entry-level education requirement for new PTs. An MPT generally consists of four semesters of classroom instruction and four to six months of clinical experience. A recent APTA survey of all accredited education programs indicates that on average, MPT programs' didactic component totals 1,642 clock hours of instruction. Clinical field placements are 1,136 hours long, on average (or 32.5 weeks, assuming 35-hour weeks).

PTA programs must offer curriculum designs that can be completed in five or fewer semesters of full-time enrollment. Program requirements consist of three didactic components (general education, applied physical therapy sciences, and technical skills) plus clinical field experience. As with its MPT program criteria, CAPTE requires that PTA students be exposed to patient care and teaching, as well as have opportunities to observe and participate in other aspects of field work, such as quality assurance activities. The APTA survey of accredited programs indicates that on average, PTA programs' didactic components total about 831 clock hours of instruction. Clinical field placements are about 667 hours long, on average (or 19 weeks, assuming 35-hour weeks).

Professional distinctions

Graduating from an accredited education program and passing a national exam are minimum requirements for state licensure, which is required of PTs in all states and of PTAs in most states. States that require licensure renewal often include periodic completion of continuing education credits. Unlike states that regulate PTAs, states with no PTA licensure-related process do not have administrative mechanisms for censuring PTAs or revoking their ability to work as PTAs. Relatedly, these states also do not have processes in place to tally any work-place violations of PTAs nor track cross-state movement of violators.

In our discussions with stakeholders, APTA representatives and those from the Federation of State Boards of Physical Therapy (FSBPT) noted that from both the educational and regulatory perspectives, PTAs do not have an independent, unique body of knowledge; their knowledge base exists within the PT knowledge base. Relatedly, PTAs do not have a “scope of practice”—a term strictly reserved for PTs in model definitions and the model state practice act for physical therapy. These representatives further emphasized that, regardless of state and federal regulations, PTs are professionally and legally responsible for all care rendered under their license, including all services furnished by PTAs under their direction and supervision. FSBPT representatives added that PTs’ legal risk regarding care furnished under their direction and supervision is greater in states that do not regulate PTAs.

Current issues in PT practice and education

An important current policy and regulatory issue to the field is the allowance of “direct access” to PTs, or access to PTs without prior physician referral. All but three states allow PTs direct access to perform patient screenings, evaluations, and consumer education activities. In addition to these activities, 35 states allow PTs to provide a range of specified therapy services without physician referral. In their direct access regulations, some states specify prohibited procedures and/or require a minimum level of work experience. Physician consultations sometimes are required if therapy services are furnished beyond a specified period, such as 30 days.

While nearly all states allow direct access to some level of physical therapy services, some health plans require physician referral as a condition of coverage. As a result, the referral process is still common in some health care markets in states that allow direct access. Further, Medicare coverage regulations do not allow reimbursement for PT services absent physician referral. The direct access issue is not directly related to supervision of PTAs. However, policymakers might argue that removing the physician referral from the physical therapy patient intake process would eliminate an important source of patient oversight.

During our discussions with stakeholders, several commented that a potential transition, in the long run, to a doctoral-level degree as the entry-level PT education requirement would assist with direct access efforts. Related in part to this, recent literature indicates that some have suggested that the entry-level PTA degree should be transitioned at some point to the baccalaureate level. Our review of this discussion in the literature does not indicate that PTA supervision requirements or issues have been mentioned. However it is likely that any future establishment of a baccalaureate PTA degree might usher new discussion regarding PTA supervision regulations.

PTA supervision regulations

Medicare regulations

Medicare regulations require “personal” (meaning in-room) supervision of PTAs furnishing services in private therapist practices. APTA requests that “direct” supervision (meaning on-premises) be required instead. Medicare requires “general” supervision (meaning periodic inspection and PT availability by telecommunication) of PTAs furnishing services in skilled nursing facilities (SNF), comprehensive outpatient rehabilitation facilities, certified rehabilitation agencies, and home health agencies. Direct supervision is required in physician practices.

Stakeholder discussions and impact on private practices

In our discussions with policymakers and stakeholders, some speculated that historically, facilities have been permitted a looser level of PTA supervision compared to private practices under Medicare regulations because of the presence of other clinical personnel in facilities. Some also speculated that the looser facility regulations are due in part to the oversight provided by the periodic state survey and certification process undergone by facilities. Some stakeholders also noted that the patient assessment instruments required relatively recently by Medicare in the SNF, inpatient rehabilitation, and home health settings yield patient and service information— and thus review and oversight opportunities— not available regarding therapy furnished in either private practices or other ambulatory settings.

The safeguards in place in the private practice setting, by contrast, have been the stricter supervision requirement and the dollar-based coverage limits (which, many say, historically have effectively limited the patient mix served by private practices). In our discussions with stakeholders, others countered that some facilities (particularly some certified rehabilitation agencies) also do not have “other clinical personnel” on site, and have a case-mix generally equivalent— and thus patient safeguard needs that are generally equivalent— to that of private practices.

Our conversations with stakeholders indicate that most are not in favor of a personal supervision requirement regarding PTAs— applied to private practices or any other setting— for several reasons. Some were against a personal supervision requirement in private practices because it is a stricter requirement than states’ PTA supervision regulations and is not consistent with Medicare regulations on PTA supervision in other settings. Some suggested that regulations be applied consistently in particular to private practices and certified rehabilitation agencies, given the similarities

of these settings and their case-mix relative to other settings. Many stated that supervision is not the key to ensuring patient safety. Some stated that a personal supervision requirement might slow access to therapy services in rural areas or in other localized areas with PT supply shortages. Another issue raised during our discussions is that the requirement creates tensions between cost-efficiency from the provider perspective and patient privacy needs.

Regarding physical therapy regulations overall, many commented that states' reevaluation requirements, periodic supervision visit requirements, and maximum PTA to PT ratios (as summarized below) affect a facility's or practices' utilization of PTAs more than the actual supervision level required by states. Non-regulatory factors affecting PTA utilization were discussed as well, including the length of a patient's therapy episode, a provider's volume of therapy patients, and local PTA supply.

In our discussions, those most familiar with private practices relayed that the operational reactions by private practices following the 1999 regulations regarding personal supervision have varied, based on three main factors: a practice's physical or structural layout, its Medicare patient volume, and its Medicare volume relative to its total patient volume. Commenters stated that private practices with relatively open physical designs are affected less than others. Private practices with Medicare patient loads that are small in number (in absolute and relative terms) also are affected less than others. However, they stated that private practices with large Medicare caseloads and with physical layouts that do not accommodate in-room or in-sight supervision typically have reacted by reducing their number of PTA employees. Participants added that some practices with very small Medicare caseloads might have stopped accepting Medicare patients, rather than alter their staff mix. Overall, most participants familiar with private practices either stated or implied that private practices do not use PTAs to treat Medicare patients as frequently as they would, absent the personal supervision requirement.

State PTA supervision regulations

If states have more stringent PTA supervision regulations than Medicare, then providers must follow state regulations when furnishing services to Medicare beneficiaries. We collected and analyzed states' statutes and administrative code regarding the practice of physical therapy pertaining to PTA supervision. Below, we summarize the variety of PTA supervision requirements existing at the state level.

While we found that supervision requirements vary across states, terminology and definitions differ as well. For example, depending on the state, "direct" supervision can refer to requiring full-time on-site supervision, periodic on-site supervision, or only telecommunication supervision. Though terminology varies, our content analysis of the

regulations indicates that essentially four levels of PTA supervision are used by states. We describe these levels as:

- full-time on-site (or on-premises) supervision;
- periodic in-room (or in-sight) supervision, with telecommunication supervision at other times;
- periodic on-site (or on-premises, but not necessarily in-room or in-sight) supervision, with telecommunication supervision at other times; and
- telecommunication supervision at all times.

Overall, eight jurisdictions (seven states and Washington, DC) or 16% of all states require full-time on-site supervision; another seven states stipulate periodic in-room supervision; 16 states (31%) require periodic on-site supervision; another 16 states permit telecommunication supervision. Five states (10%) do not explain their supervision requirements as clearly as other states. After reviewing all states' codes, we infer that these five permit telecommunication supervision at all times. If the five are included in the telecommunication category, then 21 states (41%) use that level of supervision.

Accompanying the periodic in-room and periodic on-site levels of supervision used by some states, some further specify a minimum frequency of supervisory visits. Most states requiring periodic in-room supervision expressly stipulate a minimum schedule where the supervising PT personally inspects or views the PTA furnishing services. States indicating periodic on-site supervision do not indicate a personal inspection requirement of PTA services, but rather the immediate, on-site availability of a supervising PT at a minimum schedule. While the minimum required schedules vary, the most commonly required frequency for periodic supervision is every 4 to 6 patient treatment visits or 30 days. A few states that require only telecommunication supervision also specify a maximum radial distance or time period within which a PT must remain when supervising PTAs.

In addition to their supervision-level requirements, two-thirds of all states (33) have established a maximum number of PTAs that a PT can supervise at one time. Of the 33 states, 25 establish ratios strictly between PTAs and PTs; the remaining eight states include aides with PTAs in their ratios. On average, states' ratios are slightly higher when aides are included (2.75 PTAs and aides to 1 PT, compared to 2.52 PTAs to 1 PT). While the ratios in both groups of states range from 2:1 to 4:1, the most commonly used ratio among states with a strict PTA to PT limit is 2:1; the most frequently used ratio among states that include aides is 3:1.

Also across supervision levels, some states specify a minimum frequency of patient reevaluations to be performed by a PT. The minimum schedule varies, but the

most common requirement calls for reevaluations every 30 days or every 10 to 20 visits (depending on the state). While the purposes of periodic supervisory visits and patient reevaluations are distinct, discussions with clinicians and state physical therapy board members indicate that in practice, the two activities often overlap.

PTA supervision requirements and payment/coverage policies

In requesting analyses regarding supervision of PTAs, policymakers also queried whether any relationships and implications exist between PTA supervision requirements and Medicare payment or coverage policies.

Medicare Part B therapy furnished by private therapist practices (as well as by physician practices) has been paid under the physician fee schedule since 1992. Through 1998, Part B therapy payments to facilities were based on their costs as submitted to Medicare. As of 1999, the 1997 Balanced Budget Act (BBA) required that facilities furnishing Part B therapy be paid under the physician fee schedule as well. Facilities were paid on a cost-basis in 1998, with a 10% payment reduction for savings.

Therapy furnished by private practice therapists has been subject to annual, per beneficiary coverage limits since 1974. The 1997 BBA required, effective 1999, the coverage limits to be extended to all Part B therapy providers except hospitals. The caps are not currently implemented; Congress placed a moratorium on them for 2000 through 2002. Several therapy organizations have requested that Congress extend the moratorium at least through 2003. In addition, a bill was proposed in spring 2001 that would simply eliminate the caps, rather than extend the moratorium. The bill's sponsors state that repealing the caps would cost about \$500 million over five years, according to a PricewaterhouseCoopers cost estimate. Compared to Congressional cost estimates, the PricewaterhouseCoopers estimate is conservative. CBO estimated that the one-year cost of the moratorium during 2002 is \$200 million.

Our prior research on Medicare Part B therapy expenditures shows that both aggregate and per patient spending fell substantially in 1999, due to the across-the-board implementation of the fee schedule as well as due to the coverage limits. Nominal aggregate expenditures declined from \$2.2 billion in 1998 to \$1.4 billion in 1999; per patient annual payments fell from \$709 to \$480. In 2000—the first year of the coverage limit moratorium—expenditures climbed back up to a level between 1998's and 1999's spending levels. Aggregate payments rose to about \$2.0 billion; per patient spending rose to \$642.

To the extent that Medicare PTA supervision requirements affect a provider's therapy staff mix and overall costs, supervision requirements would impact Medicare

spending (and a dollar-based coverage policy) under a *cost-based* reimbursement policy. Under a *fee schedule* payment policy, PTA supervision requirements would impact Medicare expenditures and coverage limits if a provider's therapy staff mix affects the number of therapy services furnished per patient. We have not found prior research studies analyzing the effect of PTA utilization relative to PT utilization on the number of therapy services consumed. Anecdotally, some clinicians commented to us that they believed PTs often can obtain a given patient outcome earlier than PTAs because of PTs' additional analytic and evaluative training. Other commented that their experiences regarding this issue were too diverse to generalize.

The incentives of a fee schedule payment policy suggest that a supervision requirement, to the extent that it affects staff mix, clearly affect costs from the *provider* perspective. Under a cost-based reimbursement policy, a provider generally can pass along to a payer the higher costs associated on average with using both PTAs and in-room or in-sight supervising PTs to furnish all services, rather than PTAs to furnish most services. Similarly, the higher costs of employing only PTs to furnish all services, instead of using PTAs to furnish most services, could be recouped as well. Under a fee schedule payment policy, however, providers have an incentive to utilize the lowest-cost staff that can furnish services.

The private practice participants in our stakeholder discussions commented that their use of PTAs remains somewhat cost-efficient, from their perspective, when treating Medicare patients in open or gym-like areas (where PTs can maintain in-room or in-sight supervision over multiple PTAs and patients). However, in circumstances where privacy needs dictate that Medicare patients receive services in individual rooms, participants stated that typically it is not cost-efficient from their perspective to use the combination of a PTA and an in-room supervising PT. It is more cost-efficient to rely solely on a PT to furnish these services. And if supervision regulations permitted, a provider's cost savings would be greatest when using PTAs to furnish these services.

The efficiency incentive of a fee schedule is compatible with the philosophy underlying the resource-based foundation of the Medicare physician fee schedule. The resource-based fee schedule originally was designed so as to pay for a service based on the work effort and practice expense necessary to perform the service, rather than on the type of provider furnishing the service. Under this principle, the current physician fee schedule rate for a given physical therapy service (such as, for example, range of motion exercises) would be appropriate— regardless of the type of staff used and supervision level— only if the therapy staff mix and supervision patterns in existence today were reflected in the original development of the work effort and practice expense components of the fee schedule rates for physical therapy services.

However, current staffing or supervision patterns may vary substantially from the patterns in place when the work effort and practice expense components of the fee schedule were developed. Specifically, if today's relatively expanded role of PT assistants in providing therapy services was not reflected in the original development of the work effort and practice expense components of therapy services, then the work effort components, for example, would be overvalued for a service when performed by a PT assistant. Similarly, the practice expense component may undervalue the supervision activities of a PT. In this case, reexaminations of such components would be warranted analytically.

Introduction

Medicare conditions of coverage regulations require that physical therapists (PTs) in private practice maintain a “personal” level of supervision of physical therapist assistants (PTAs), when PTAs furnish therapy services to Medicare beneficiaries. As current regulations explain, a “personal” level requires the supervising PT to be “in the room” when PTAs furnish services.

The Benefits Improvement and Protection Act (BIPA) of 2000 requires the Centers for Medicare and Medicaid Services (CMS) to conduct a study to review Medicare's regulations regarding PTAs, and submit a report to Congress on the issue. Section 421 of BIPA states that:

"The Secretary of Health and Human Services shall conduct a study of the implications—

- (A) of eliminating the ‘in the room’ supervision requirement for Medicare payment for services of physical therapy [sic] assistants who are supervised by physical therapists; and
- (B) of such requirement on the cap imposed under section 1833(g) of the Social Security Act (42 U.S.C. 1395l(g)) on physical therapy services."

This subsection (B) refers to coverage limits, or caps, established by the Balanced Budget Act (BBA) of 1997. The BBA limited coverage of Part B physical therapy and speech/language pathology services to \$1,500 per beneficiary annually, and occupational therapy to \$1,500 per beneficiary annually. Therapy furnished by hospitals is exempt from the limits. Before 1999, dollar limits on therapy applied only to services furnished

by physical and occupational therapists in independent (now termed private) practice. Congress later placed a moratorium on the limits for 2000 through 2002.

To assist CMS in evaluating Medicare’s supervision regulation in the private practice setting, we collected and analyzed states’ supervision and related statutes and administrative regulations of PTAs, and the model practice act developed for states by the Federation of State Boards of Physical Therapy (FSBPT). To understand current perspectives regarding PTA supervision as well, we held discussions with a purposive sample of clinicians and representatives from several provider settings, including hospitals, nursing homes, certified rehabilitation agencies, home health agencies, and private physical therapy practices. We also spoke with representatives from licensing and accreditation bodies—FSBPT, some individual state boards, the Commission on Accreditation in Physical Therapy Education (CAPTE), and the Rehabilitation Accreditation Commission. Supervisory regulations inherently recognize a differing capability between supervisor and supervisee. To help describe the basic capability differences between PTs and PTAs, we also reviewed normative and evaluative criteria developed by CAPTE for entry-level PT and PTA education programs. To view broadly how these criteria are translated into curricula, we reviewed the curricula of several PT and PTA programs. Finally, as background information, we analyzed trend data on PT and PTA workforce estimates, and recent data on their demographic characteristics.

This report first summarizes our analyses of PT and PTA workforce estimates and demographics; overall PT and PTA education differences; and state-level PTA supervision regulations. The report then discusses stakeholder comments and relationships between PTA supervision requirements and coverage or payment policy.

Background

Physical therapists and physical therapist assistants

Physical therapists provide evaluative and rehabilitative services to patients with

physical impairments, functional limitations, disabilities, or changes in physical function and health status resulting from injury, disease, or other causes. PTs assess joint motion, muscle strength and endurance, heart and lung function, and performance of activities required in daily living, among other responsibilities. Common treatment interventions includes therapeutic exercise (such as strengthening and mobility exercises), customization and training in the use of prosthetic devices and equipment, wound management, cardiovascular endurance training, and training in activities of daily living (APTA, 2001a).

PTAs are skilled health care providers who work under the direction and supervision of PTs. Frequently, PTAs implement designated therapies in patient treatment plans formulated by PTs. For example, PTAs train patients in exercises outlined by PTs, and typically report to PTs on patient performance and responses. Other PTA responsibilities can include equipment preparation, basic wound care, application of hot/cold packs, electrical stimulation, and data collection activities. PTAs are not trained nor permitted to perform patient evaluations or design treatment plans (APTA, 1999d).

Workforce estimates

Data sources

Identifying trends and recent state-level estimates of PTs and PTAs required using data from several sources. For latest available estimates, we used the 1999 survey of State Occupation Employment and Wage Estimates conducted by the U.S. Department of Labor, Bureau of Labor Statistics (BLS). We also examined a 1999 survey of state PT and PTA licensure data conducted by the Federation of State Boards of Physical Therapy. For trend data, we analyzed 1980 and 1990 files of the Integrated Public Use Microdata Series (IPUMS), which are 5% sample files created originally by the Census Bureau as part of each decennial enumeration. We also reviewed trend estimates summarized at the national level by the Health Resources and Services Administration. Chevan and Chevan (1998) suggest in their 1980 and 1990 analysis of the PT workforce, no single data source

exists to accurately identify, especially at the state level, the number of PTs and PTAs.

Examining multiple sources can be problematic, but necessary. On one hand, BLS surveys cannot be used to analyze PTA trend data, because until 1999 PTAs and aides were grouped together on the survey. On the other hand, IPUM samples cannot yet be used to identify recent estimates because samples from the 2000 Census are not available. The Census samples do not expressly distinguish PTs, PTAs, and aides—however Chevan and Chevan (1998) approximated the PT group using the data file’s “highest degree attained” variable. This method is still imperfect for our purposes because, for example, roughly 20% of PTAs have bachelor’s degrees in addition to their PTA training (which occurs at the associate degree level). Comparing the three major sources, BLS surveys produce lower estimates than Census samples, and Census samples yield lower estimates than licensure counts. Licensure counts produce overestimates, because some individuals are licensed in multiple states. Gwyer (1995) estimated that licensure counts produce a 25% over count of PTs; Chevan and Chevan (1998) estimated a 37% over count of PTs. PTAs were not estimated in these studies.

Workforce estimates

US census data indicate a total of 34,882 PTs and 12,925 PTAs in 1980, resulting in rates of 15.4 PTs per 100,000 population and 5.7 PTAs per 100,000 population in that year. By 1990, the totals rose to 71,857 PTs and 26,859 PTAs, resulting in a rate of 28.9 PTs per 100,000 and 10.8 PTAs per 100,000. During the ten years, the PT rate and the PTA rate each increased about 6.5% on an average annual basis.¹

BLS survey data estimate a total of 104,330 PTs and 28,499 PTAs in the U.S. in 1999, resulting in a rate of 40 PTs per 100,000 population and 12 PTAs per 100,000 population.² As can be seen in Figure 1, across CMS regions the rate of PTs ranges less

¹ Chevan and Chevan’s (1998) analysis of 1980 and 1990 census data analysis produced equivalent PT estimates; PTAs were not estimated in that study.

² The BLS survey lacks PT workforce estimates from 4 states and PTA estimates from

than three-fold, from a low of 27 per 100,000 (Seattle region) to a high of 68 (Boston region). After Boston, four regions have fairly similar rates, ranging from 38 to 44— in the Kansas City, San Francisco, Atlanta, Chicago, and Denver regions. Another four regions also have fairly similar rates, ranging from 27 to 32— in the New York, Philadelphia, Dallas, and Seattle regions.³

An examination of the figure indicates that a greater range of PTA rates exist across regions, relative to PT rates. Varying nearly eight-fold, the rate of PTAs ranges from a low of 3 per 100,000 (Seattle region) to a high of 24 (Boston region). While the Boston region PT rate is much higher than other regions' PT rates, its PTA rate is similar to those of the Kansas City (22) and Chicago (20) regions. After those three regions, the rate of PTAs ranges from 8 to 16 across four regions (Atlanta, Denver, San Francisco, and Philadelphia). Three regions are clustered around a low rate — Dallas (4), New York (3) and Seattle (3). While the range across regions is much greater for PTA rates than PT rates, the actual rank of regions by PT and PTA rate remains very similar.

State-level workforce estimates are listed on Table 1. Examining the data within regions reveals that state rates are fairly clustered around the regional mean in six regions (Boston, Atlanta, San Francisco, Chicago, New York, and Seattle). Within each of these regions, state rates vary by less than two-fold. The high PT rate of the Boston region is driven particularly by Massachusetts's (77). Along the entire eastern corridor, two states have low rates relative to other eastern states— Virginia (18) and West Virginia (20).

PTA rates also vary considerably more than PT rates within regions. Only three

Washington, DC and 10 states, and thus may undercount the national workforce. Using the BLS data and FSBPT licensure data (adjusted for duplicate counts of individuals due to multiple licensure), we used a simplified hot-deck imputation method to estimate a total PT and PTA workforce of 107,559 PTs and 35,833 PTAs. These estimates would result in a rate of 39 PTs per 100,000 population and a rate of 13 PTAs per 100,000.

³ Where BLS PT and PTA estimates are missing, we subtracted the respective states' total populations from the denominator when calculating the respective regional and national rates per 100,000 population.

regions are comprised of state PTA rates that vary by less than a factor of two (Kansas City, Chicago, and New York regions). On the other extreme, rates vary by factors of 8 to 14 within four regions (Denver, Dallas, Philadelphia, and San Francisco). Mirroring the highest state PT rate, Massachusetts also has the highest PTA rate (31).

Ratio of PTAs to PTs

To illustrate the relative workforce of these two categories of workers, Figure 2 presents regional ratios of PTAs to PTs.⁴ In 1999, this ratio was 0.27— or, there were roughly 3.5 PTs per one PTA nationally. Across regions, the ratio of PTAs to PTs ranges less than four-fold, from a low of 0.11 (New York region) to a high of 0.38 (Atlanta region). Comparing the rank order of regions by PT rate, PTA rate, and relative ratio reveals that two regions, Kansas City and Atlanta, substantially change rank in terms of ratios. While the Kansas City region has the second highest PT and PTA rates, it ranks seventh in its ratio of PTAs to PTs (0.22). The Atlanta region has the fourth highest PT and PTA rates, but it has the highest relative supply of PTAs (0.38, or about 2.5 PTs per PTA regionally).

Annual wages

Table 1 also lists the BLS survey's average PT and PTA wage data. The mean annual wage income of PTs was \$55,936 in 1999, almost twice that of PTAs (\$30,274). The top 10 percent of PTs earned over \$83,000; the top 10 percent of PTAs earned \$45,000 or more. Private practice owners comprise a relatively high share of those with higher incomes (BLS, 2000). To roughly approximate the relative direct costs of PTs and PTAs, Table 1 provides the ratio of PTA wages to those of PTs. This ratio ranges from a low of 0.36 (Dallas region) to a high of 0.59 (San Francisco region). Across states, the ratio ranges from a low of 0.29 (Pennsylvania) to a high of 0.68 (New Hampshire).⁵

⁴ Where either BLS PT or PTA estimates are missing, we subtracted these states' total populations from the denominator when calculating state, regional, and national ratios of PTAs to PTs. The national ratio of PTAs to PTs calculated after performing hot-deck imputations for the states with missing data change slightly, from a ratio of 0.27 (or 1 PTA to 3.6 PTs) to a ratio of 0.33 (or 1 PTA to 3.0 PTs).

⁵ It is interesting to note that the average PTA to PT wage ratio (0.54), based on BLS survey data,

Workforce projections

Between 2000 and 2010, the BLS projects a PT employment increase of 2.9% annually, from 132,000 to 176,000. At 3.8%, the projected PTA employment annual increase is slightly larger (from 44,000 to 64,000 PTAs over the 10-year period). These projections yield PTA to PT ratios of 0.33 in 2000, and 0.36 in 2010 (BLS, 2002).⁶

Vector Research, Inc. conducted a more detailed projection study, focused only on PTs and PTAs, in 1997 for APTA. To develop PT and PTA supply and demand estimates for 2000 and 2005, the study used 1995 baseline workforce estimates and current salary and vacancy rate data. The researchers also interviewed educational program directors, recruiters, state APTA representatives, researchers, and PTs and PTAs. The demand estimates were based on a per capita staffing model that assumes an increasing managed care presence.

Compared to the BLS estimates, the Vector study projected lower PT growth and higher PTA growth. Specifically, their projections for 1995 through 2005 indicated an estimated 0.5% average annual decrease in PT demand, but a 4.9% average annual increase in PT supply. Regarding PTAs, the estimates indicated 5.5% and 11.2% average annual increases in PTA demand and supply, respectively. The authors note that their declining PT demand estimates are based in large part on trends of increased utilization of PTAs. Relatedly, compared to the BLS projections the Vector study's estimates also yield a higher projected PTA to PT ratio. It projected this ratio would increase from 0.28 in 1995 to 0.49 in 2005.

is substantially less than the PTA to PT wage ratio of 0.75 used by CMS in the past when it applied salary equivalency rates in determining payments based on reasonable costs for physical therapy services (HCFA, *Medicare and Medicaid Programs: Salary Equivalency Guidelines for Physical Therapy, Respiratory Therapy, Speech Language Pathology, and Occupational Therapy Services; Final Rule*. Federal Register vol 63 no 20. January 30, 1998.)

⁶ BLS estimates of PT and PTA *jobs* exceed its estimates of individuals working as PTs and PTAs because many individuals in these fields hold two physical therapy jobs (BLS, 2000).

Employment and demographic characteristics

Data sources

Recent demographic characteristics of PTs and PTAs are available regarding APTA members through the organization's March 2002 membership renewal database update. APTA has almost 52,000 members: PTAs comprise 9.5% (almost 5,000) of the members; PTs comprise the balance (about 46,500). Employment setting data are available both from the membership database and from a fall 2001 APTA survey of both members and non-members. Comparing the workforce estimates above with APTA membership indicates that PTs are more likely to join the organization than PTAs. Workforce estimates show that PTs outnumber PTAs by 3 to 1, while PT members outnumber PTA members of APTA by 10 to 1.

Work setting

According to the fall 2001 survey of member and non-member PTs and PTAs, the distribution of the PT workforce and the distribution of the PTA workforce are fairly equivalent regarding four settings. That is, private practices is the setting of roughly 25% of PTs and 25% of PTAs as well; outpatient facilities is the setting of almost 20% of each group; acute hospitals (inpatient) account for almost 14% of each; and "other" settings account for about 5% (Figure 3). A much larger share of PTAs than PTs, however, works in skilled nursing facilities or SNFs (21.7% of PTAs versus 8.7% of PTs). A slightly higher share of PTAs also works in inpatient rehabilitation facilities (7.2% of PTAs versus 5.0% of PTs). Larger shares of PTs relative to PTAs work in the home health care and colleges/schools settings.⁷

Examining the work setting data from APTA members in Figure 4 suggests that

⁷ Prior research shows that the number of private practices billing Medicare and the number of outpatient facilities certified under Medicare as rehabilitation agencies grew substantially in the late 1980s and 1990s (Maxwell and Bassegio, 2000). This suggests that the distribution of PTs and PTAs by setting likely has shifted over time.

the relative distribution of member PTs and PTAs is roughly similar to that of both members and non-members seen in Figure 3. However, a comparison of the two figures reveals that the absolute distributions differ between the survey and the member database. In particular, the member and non-member survey data in Figure 3 indicate that lower shares of the survey respondents work in the private practice setting (roughly 25%), compared to the membership data in Figure 4 (about 30% in private practice). And, higher shares of the survey respondents work in SNFs (8.7% PTs and 21.7% PTAs), compared to the membership data in Figure 4 (6.3% PTs and 14.7% PTAs). These differences suggest that PTs and PTAs employed in private practices may be more likely to be APTA members than those who work in SNFs.

Demographic characteristics

As a group, PTAs have much fewer years of experience in the field than PTs. As seen from APTA membership data in Figure 5, 60.2% of PTAs have been employed as PTAs for less than five years, compared to 24.3% of PTs. In contrast, PTs are fairly evenly distributed across the tenure categories— about 15% to 25% of PTs are represented in each five-year category. As Figure 6 suggests, PTAs and PTs are more similar in terms of age than experience. The average age of PTs is 40.3; the average age of PTAs is 36.9. While these data compare APTA members only, our analysis of 1980 and 1990 Census data trends suggest that PTs and PTAs are fairly similar in age, regardless of APTA membership.

Figure 7 shows that among APTA members, a higher share of PTAs than PTs are women (80.2% of PTAs and 67.2% of PTs). Our analysis of 1980 and 1990 Census data trends suggest that among all PTs (members and non-members), a greater share (roughly 70% to 75%) may be female. In terms of race/ethnicity, about 91% of PTs and PTAs are non-hispanic white. Chevan and Chevan's Census data analysis (1998) reported similar findings regarding race/ethnicity.

Highest attained degree

Although PTA education programs are associate degree programs, some PTAs are second-career individuals, and may have other college degrees (Le Postollec, 2000).

Almost 71% of PTAs' highest earned degree are an associate's degree; most of the remaining has a baccalaureate degree (Figure 8). The highest earned degree of 50% of PTs is the baccalaureate degree. The share of PTs with a master's degree in physical therapy will increase over time, due to a recent change in entry-level requirements (as discussed in the following section). As Chevan and Chevan (1998) reported, in 1980 and 1990 only about 15% of PTs held master's degrees.

Educational and professional differences

While both PT and PTA education programs prepare graduates to provide basic physical therapy services, such as range of motion exercises, PT education programs train students in additional skills that are more analytic in nature. These include patient screening, evaluation, diagnosis, prognosis, and care plan design. Recognizing these distinctions, the accrediting body for PT and PTA education programs, in concert with APTA, established academic requirements and guidelines that correlate to PT and PTA technical skill expectations. Graduating from an accredited education program and passing a national exam are minimum requirements for state licensure (required of PTs in all states and of PTAs in most states).

Although Medicare regulations regarding the supervision of PTAs do not address specific activities or procedures, it is useful to understand the educational preparation and workplace skills of an entry-level PTA, with respect to a supervising PT. This report section compares PT and PTA educational programs and workplace skills through discussions of program accreditation requirements, national licensing exams, sample program curricula, and our interviews with clinicians and relevant provider and licensing organizations.

Accreditation, national examination, and licensure

Accredited education programs

The Commission on Accreditation in Physical Therapy Education or CAPTE, affiliated with APTA, accredits post-baccalaureate PT programs and associate degree PTA programs. To focus attention on curriculum design and clinical field experience, CAPTE accredits education *programs*, rather than the institutions that offer them. Additionally, because some schools offer more than one program, CAPTE is able to assess each program separately.

Effective 2002, CAPTE discontinued accrediting bachelor degree PT programs, requiring schools to offer master and/or doctoral level PT programs.⁸ Currently, 190 colleges or universities offer a total of 199 PT degree programs: 158 masters' programs and 41 doctorate programs (Table 2). Between 1999-2000, the numbers of bachelor degree programs decreased and the number of doctorate programs increased. APTA reports that 7,411 PT students graduated from accredited programs in 1999 (includes bachelor's and master's degrees), resulting in a 92% graduation rate (Figure 9).

Regarding PTA programs, APTA reports that 247 community or junior colleges support a total of 259 full- and part-time accredited PTA programs. The number of PTA programs has decreased slightly since 1999 (266 programs). APTA reports that 5,455 PTAs graduated in 1999— about one-quarter less than the number of PT graduates— resulting in an 81% graduation rate (Figure 9).

The National Physical Therapy Examination

PTs in all states, and PTAs in most states, must pass *The National Physical Therapy Examination*, a computer-based licensing exam with versions for PTs and PTAs. The national exam is designed by The Federation of State Boards of Physical Therapy

⁸ PTs who graduated from an accredited bachelor's degree program prior to 2002 are exempt from the master's level education requirement.

(FSBPT), which processes exam applications, grades the exams, and reports scores to state physical therapy boards. Only graduates of accredited PT and PTA programs are permitted to take the exam. The two versions of the exam test basic, entry-level competencies of PT and PTA candidates, respectively. FSBPT representatives reported to us that their exams are updated annually to reflect the evolving skill set and knowledge base demanded of PTs and PTAs in current practice.

The PT exam is 4.5 hours with 225 multiple choice questions; the PTA exam is 3.5 hours with 175 questions (FSBPT, 1997). In the 1999-00 academic year, 78% of first-time test takers passed the PT exam, and 73% passed the PTA exam (Figure 9).

State licensure

Each state board establishes its eligibility criteria for PT and PTA licensure. All states require PTs to be licensed, which at a minimum includes passing the national exam (and graduating from an accredited PT program, since that is an exam criteria). Some states have additional requirements. For example, Missouri requires that PT candidates be at least 21 years old. Other states, such as New Mexico, require the passage of a jurisprudence examination testing their knowledge of the state's laws governing physical therapy.

Although all states require PT licensure, only 43 states require PTAs to be similarly regulated. Specifically, four states require PTAs to register with the state; six require PTAs to obtain certification; one state requires an approval process; and 32 states require actual licensure. These processes are not necessarily equivalent. For example, of these processes, licensure traditionally is the most stringent regulation, while registration traditionally is the least stringent. States weigh the likely risk that an activity imposes on the public in deciding which regulatory requirement is most appropriate (FSBPT, 1999). FSBPT representatives commented that despite states' use of these different terms, the actual regulatory requirements regarding PTAs overlap the terminology in some cases.

The eight jurisdictions that do not require PTA licensure or related regulation include Washington, D.C., Hawaii, and six states in the upper-midwest and west (Michigan, Minnesota, Wisconsin, Colorado, Utah, and Washington). All states that regulate PTAs in this manner except two require PTA applicants to pass the national exam. New York does not require passage of the exam, and California does not require PTAs to have graduated from an accredited program nor to passage of the exam. As states have added PTA licensure-related regulations over time, existing PTAs have been exempt from the new regulation in some cases (such as in Massachusetts, which implemented licensure regulations in 1983). Other states have required existing PTAs to meet the new regulations (such as Arizona, which implemented PTA licensure in 1998). In our interviews, FSBPT representatives stated that the organization officially supports licensure (or related) regulation of PTAs, and added that in states that do not have PTA licensure-related regulations, many new PTA graduates nonetheless take the national exam to improve their employment prospects.

Unlike states that regulate PTAs, states with no PTA licensure-related process do not have administrative mechanisms for censuring PTAs or revoking their ability to work as PTAs. Relatedly, these states also do not have processes in place to tally any workplace violations of PTAs nor track cross-state movement of violators. In addition, FSBPT representatives stated that PTs' legal risk regarding care furnished under their direction and supervision is greater in states that do not regulate PTAs. During our discussions with stakeholders, clinical staff recruiters stated that PTAs living near borders of PTA-regulated and non-regulated states often hesitate to work in the non-regulated state, as they feel that PTAs are recognized or viewed as less professional in that state.

Continuing education

Almost one-half of all states require PTs and PTAs to complete continuing education (CE) credits periodically for licensure renewal. Specifically, PTs must document CE credits in 24 states and the District of Columbia, and PTAs must do so in

21 states.⁹ The three states that require PT, but not PTA, CE credits are Minnesota, Arizona, and Washington. In general, most states in the south and midwest areas require CE; several states in the east coast area of the country do not.

A review of the number of required CE credit units per time period indicates that in about one-half of the states requiring CE, PTAs must earn the same number as PTs. In the remaining states, the unit requirement for PTAs is smaller. (The “time period” allowed for meeting CE requirements is one year in slightly over one-half of the states, and is two years in the remaining ones.) Calculating all CE states’ unit requirements per a one-year period (for purposes of comparison) indicates that the number of required PTA and PT units both ranges from 0.25 units per year (North Dakota) to 3.0 units per year (Missouri). On average among the CE states, 1.3 units are required for PTAs; 1.6 units are required for PTs. The most common PTA credit requirement is one unit; the most common PT credit requirement is both one and two units.

Entry-level PT and PTA education programs

CAPTE has developed educational requirements that PT and PTA programs must meet to receive accreditation. Additionally, APTA has developed normative models of PT and PTA education programs, which are closely linked to the CAPTE education requirements. The normative models elaborate on how specific classes required by CAPTE can translate into workplace skills. In addition to classroom instruction, skills are gained through field placements at affiliated clinical settings. To keep pace with entry-level performance expectations of employers, the level of CAPTE requirements and amount of information represented in APTA normative models have increased over time.

PT education programs

An accredited master’s degree program in physical therapy (MPT) generally

⁹ In addition, communication with the Massachusetts and Tennessee state physical therapy boards indicate that these states currently are developing their PT and/or PTA CE requirements.

consists of four semesters followed by four to six months of clinical experience, taking 2.5 years of full-time program enrollment. As shown in Figure 10, MPT programs average about 59% of students' time in didactic education (classroom and lab instruction), and the remaining 41% in clinical field experience. Students who did not major in physical therapy during their bachelor's education must fulfill basic science prerequisites, either during or prior to their MPT coursework.

CAPTE curriculum requirements for PT programs are divided into two coursework components (Foundational Sciences and Clinical Sciences) and clinical field experience. To fulfill the foundational science requirements, PT programs must provide classroom instruction in anatomy, histology, physiology, applied physiology, pathophysiology, behavioral sciences, biomechanics and kinesiology, neuroscience, pathology, and pharmacology. To meet the clinical science requirements, the programs must provide instruction in medical and surgical conditions as well as the cardiovascular/pulmonary, endocrine, gastrointestinal, genitourinary, integumentary, musculoskeletal, and neuromuscular human systems.

Table 3 illustrates MPT curricula from three of the several MPT program curricula we examined. Three programs were chosen from the full range of program rankings (one each from the top decile, fourth decile, and bottom decile) conducted annually by the *U.S. News and World Report* (2000). Despite their rank differences, the three programs are generally similar in course requirements—a function of the education program accreditation process. For example, in each of the three programs, foundational science curricula include courses on human anatomy, kinesiology, and neuroscience. All three programs include clinical science courses such as musculoskeletal pathologies and cardiopulmonary therapy. All three programs also require coursework in practical research. Some differences between the three programs are seen regarding the specificity and amount of prerequisites, and in the design of clinical field experience requirements.

CAPTE accreditation criteria also require programs to ensure that graduates can demonstrate the range of clinical competencies expected of entry-level PTs. In addition to hands-on experience with patient care and teaching, CAPTE evaluative criteria state that PT programs should provide opportunities for students to observe and participate in administrative activities, quality assurance activities, clinical research, and supervision of PTAs and other supportive personnel. To fulfill these goals, PT programs also require that students participate in clinical field placements to gain practical experience.

CAPTE does not specify a required number of clinical placement hours, but requires that PT students' final clinical experiences be full-time (longer than one week and at least 35 hours per week). A survey of MPT programs for the 1999-2000 academic year indicates that on average, clinical field placements are 1,136 hours long (or 32.5 weeks long, assuming 35-hour weeks) (Figure 10). The survey further reports that program requirements for field experience ranged from 18 to 46 weeks.

Before PT students begin their clinical field experience, they are required to have CPR and first aid certifications (CAPTE, 2002a). Education programs are not required to *provide* the CPR instruction, but merely verify CPR certification prior to allowing clinical field experience. Similarly, programs are required to ensure that students know appropriate actions to take in emergency situations.

Doctorate in physical therapy (DPT) programs generally are two years longer than MPT programs, requiring 5.5 years of full time enrollment. DPT programs typically expand upon MPT programs in specified content areas, including differential diagnosis, pharmacology, radiology/imaging, health care management, prevention/wellness/health promotion, histology, and pathology. In addition, DPT programs often require a one-year clinical experience, which is longer than the typical MPT field experience.

PTA education programs

PTA programs must offer curriculum designs that can be completed in no more

than five semesters of full-time study or 65 credits (CAPTE, 2000a). Program requirements consist of three didactic components (general education, applied physical therapy sciences, and technical skills) plus clinical field experience. As shown in Figure 10, PTA programs average about 55% of students' time in didactic time (classroom and lab instruction), and the remaining 45% in clinical field experience.

The general education component of PTA programs includes content in math, physics, biology, chemistry, humanities, and life-span growth and development. The applied physical therapy science component includes content in anatomy, physiology, and medical terminology. Technical skill course requirements include classes on physical therapy procedures, plan of care implementation, data collection techniques, and communication skills.

Table 4 illustrates the curricula from three of several geographically diverse PTA programs we examined (one each from Florida, California, and New York). Compared to coursework in the three sample PT programs, the PTA class titles are broader, leaving more room for programs to provide the required content through a variety of classes. For example, the PTA program in New York requires a four-class sequence of "Physical Therapy Assisting," which likely includes several of the applied physical therapy sciences and technical skills. In contrast, the program in California specifies its sequenced coursework by disorders. All three sample programs require anatomy coursework in their general education requirements.

In its normative model for PTA curricula, APTA recommends that PTA programs provide 16 to 18 weeks of full-time (at least 35 hours per week) clinical experience, or 400 to 800 hours completed within 12 to 20 weeks. CAPTE accreditation criteria, which are less detailed than the APTA normative model recommendations, state that PTA programs should require 520 to 720 hours of clinical education. Similar to its MPT program criteria, CAPTE requires that students be exposed to patient care and teaching, as well as have opportunities to observe and participate in other aspects of field work,

such as quality assurance activities. Further, programs should ensure that graduates can demonstrate technical skills expected of entry-level PTAs.

As seen in Figure 10, PTA programs' total clinical field experiences average about 667 hours long (or 19 weeks long, assuming 35-hour weeks). On average, PTA students' total clinical experiences are about 40% shorter than that of MPT students. The survey reports that PTA programs' full-time clinical experience requirements range from 5 to 60 weeks. All of the PTA programs illustrated on Table 4 require three outside placements. Two of the education programs on Table 4 require more than one placement to be full time.

As with PT students, before PTA students begin clinical field experience they must have CPR and first aid certifications (CAPTE 2002a). Like PT programs, PTA programs are not required to *provide* the CPR instruction, but must verify CPR certification prior to allowing clinical field experience. Similarly, CAPTE requires PTA education programs to include instruction on actions to take in emergency situations.

Skill differences and professional scope

PT and PTA skill differences

CAPTE requires accredited education programs to offer coursework and clinical experience that provide students with the entry-level skills expected in the workplace. While PT and PTA skills include basic physical therapy interventions (such as range of motion exercises) and functional training (such as wheelchair management skills), CAPTE and APTA reserve complex procedures, evaluative activities, and treatment planning for PTs. As a result, PTA programs do not address these skills. Table 5 shows the range of evaluative and other skills specific to PTs, and taught only in PT programs.

The *Guide to Physical Therapist Practice* (APTA, 2001a) provides further description of these skills. This guidebook explains that in the patient evaluation process,

a PT performs an examination and/or screening during which the PT obtains a patient history and administers tests to gather relevant patient data. These tests include those listed on Table 5, such as aerobic capacity, cranial nerve integrity, and gait assessment. Relying on the test results, PTs formulate a diagnosis associated with defined clusters, syndromes or categories. The PT also is responsible for determining the patient's prognosis—the level of optimal improvement that may be attained through intervention and the amount of time required to reach that level. Associated closely with the prognosis is the development of the patient's plan of care, which specifies the interventions to be used, their timing, and frequency. Therapeutic interventions are selected by the PT to produce improvements in the patient's condition. Some interventions are included in both of the PT and PTA skill sets listed on Table 5, but other, more complex, skills are specified only to be performed by PTs. These include sharp wound debridement and joint mobilization. Accredited PTA education programs are not expected to teach these complex skills.

Although PTAs are not trained nor permitted to perform evaluations, PTAs may collect data to carry out a patient's plan of care as designed by a PT. For example, PTAs may record vital signs and patient responses during position and activity transitions, as listed on Table 5. With such information, the PT is responsible for conducting reevaluations as necessary to determine change in patient status and to modify or redirect interventions. The decision to reevaluate may be based on new clinical findings or on lack of patient progress. If, during the course of therapy, the PT determines that the intervention strategies should be altered, the PT is responsible for changing the treatment plan. Finally, the PT is also responsible for determining when a patient is ready for discharge and/or discontinuation of therapy, in which case the PT may make recommendations for follow-up and referrals.

Our discussions with clinicians and provider organizations emphasized the helpfulness of PTAs in carrying out a patient's plan of care, initial designed by a PT. Consistent with the entry-level PTA skills listed on Table 5, participants in our interviews

stated that newly graduated PTAs are capable of administering specified physical therapy treatments to patients, such as hot and cold pack application, aerobic conditioning, and stretching exercises.

PT scope of practice

APTA defines a PTA as a technically educated health care provider who assists a PT in the provision of physical therapy and works under the direction and supervision of a PT. The evaluative skills of PTs, relative to the technical skills of PTAs, are further differentiated in several sources. For example, the *Guide to Physical Therapist Practice* (APTA, 2001a) recommends:

“... that federal and state government agencies and other third-party payers require physical therapy to be provided only by a PT or under the direction and supervision of a PT. Examination, evaluation, diagnosis, and prognosis should be represented and reimbursed as physical therapy only when they are performed by a PT. Intervention should be represented and reimbursed as physical therapy only when performed by a PT or by a PTA under the direction and supervision of a PT.”

In our interviews, FSBPT representatives added that PTAs do not have an independent, unique body of knowledge; rather, their knowledge base exists within the PT knowledge base. Relatedly, both APTA and FSBPT representatives added that PTAs do not have a “scope of practice”. This term is strictly reserved for PTs, as seen in APTA model definitions and in the FSBPT model practice act (FSBPT, 1999). FSBPT representatives further emphasized that, regardless of state or federal regulations, PTs are professionally and legally responsible for all care rendered under their license, including services furnished by PTAs under their direction and supervision.

Current issues in practice and education

Direct access

All but three states allow PTs “direct access” to perform patient evaluations,

health screenings, and consumer education activities. That is, PTs may perform these activities without physician referral. In addition to evaluating patients, 35 states also allow PTs to provide a range of specified therapy services without physician referral. Some states stipulate limits in their direct access regulations. For example, many states list particular procedures (such as bronchopulmonary hygiene and vertebrae manipulations) for which physician referral is required. Several states require PTs to have one or more years of clinical experience before they are granted direct access. Also, some states require physician consultation if therapy services are furnished beyond a specified period, such as 30 days. Although most states allow direct access to at least some level of physical therapy services, some health plans nonetheless require physician referral as a condition of coverage. As a result, the referral process may still be common in states allowing direct access (Le Postollec, 2000).

Medicare coverage regulations do not allow reimbursement for PT services absent physician referral. In December 2001, however, the Medicare Patient Access to Physical Therapists Act (HR 3363) was introduced, which would allow beneficiaries direct access to PTs furnishing Part B therapy. To ensure that services are delivered by or under the direction of PTs, the bill also amends Medicare law defining a “qualified physical therapist” as a licensed PT. (Currently, Medicare law defines the service of physical therapy but not who is qualified to deliver that service).

Direct access is not directly related to supervision of PTAs. However, one might argue that removing the physician referral from the patient intake process would eliminate an important source of patient oversight, and thus may increase the desired level of PTA supervision.

The DPT credential

In June 2000, the APTA House of Delegates endorsed *Vision 2020*. Included in this long-term goal statement is a promotion of the DPT as the entry-level PT degree. While APTA does not have an official position statement regarding the degree as an

entry-level requirement, in our interviews APTA representatives indicated support for the credential and for the development of new DPT education programs (or transitioning existing MPT programs).

In addition to increasing students' analytic and technical skills, supporters hope that transitioning the PT profession to the doctorate level will assist with direct access efforts, in terms of state regulation and health plan coverage policy. Consumer perceptions are cited as a factor as well, in that the DPT credential would address consumer expectations that the autonomous healthcare PT practitioner is a clinical doctor, on par with doctors in medicine, dentistry, optometry, and podiatry (APTA 2002a). APTA members and representatives expressed similar opinions during our interviews.

The advantages and disadvantages of a DPT degree are debated in the field. On a DPT FAQ sheet, APTA (2002a) lists perceived liabilities associated with the degree. For example, some argue that the degree is an unwarranted inflation of professional education, and that the practice of physical therapy does not require doctorate education. Others raise concern about the concomitant increase in students' educational costs. Also, some MPTs have expressed concern that DPTs will displace them in the workplace or diminish their relative value in the marketplace. Finally, others note that doctorate training runs counter to the current trend in health care, where the least expensive alternative is often preferred by some payers and consumers.

Some PTAs have expressed concern about the possibility of transitioning to the DPT as the minimum PT credential as well (Tumolo, 2000). For example, some National Assembly representatives (the PTA body within APTA) have suggested that too much disparity would exist between PTs and PTAs, should the DPT degree be required for PTs. Relatedly, some have suggested that transitioning the PTA degree to the bachelor level should be explored. Supporters add that PTA education requirements have increased over time, making it difficult to address the necessary coursework in the current PTA program. Further, some state that additional PTA education would better prepare PTAs

for the growing complexity of therapeutic tasks expected of PTAs, and potentially could raise the status of PTAs and their salaries. Others argue, however, that a four-year PTA degree does not guarantee higher salaries, absent higher insurance reimbursement for their services. Although our review of this discussion in the literature does not indicate that PTA supervision requirements or issues have been mentioned, it is likely that any future establishment of a baccalaureate PTA degree might usher new debate regarding PTA supervision regulation.

Supervision of Physical Therapist Assistants

Medicare regulations

As expanded in 1998, Medicare regulations explain the difference between personal, direct, and general supervision as:

“General supervision means the procedure is furnished under the physician's overall direction and control, but the physician's presence is not required during the performance of the procedure. Under general supervision, the training of the nonphysician personnel who actually perform the diagnostic procedure and the maintenance of the necessary equipment and supplies are the continuing responsibility of the physician.

Direct supervision in the office setting means the physician must be present in the office suite and immediately available to furnish assistance and direction throughout the performance of the procedure. It does not mean that the physician must be present in the room when the procedure is performed.

*Personal supervision means a physician must be in attendance in the room during the performance of the procedure.”*¹⁰

As revised in 1999, Medicare conditions of coverage regulations state that Medicare Part B pays for outpatient physical therapy services furnished “...by or under the personal supervision of a physical therapist in private practice...”¹¹ Since 1981, the

¹⁰ 42 CFR 410.32 (b)(3)(i, ii, and iii) as of October 1, 1998.

¹¹ 42 CFR 410.60 (a)(3)(ii) as of October 1, 1999.

Medicare Carriers Manual instructions has used slightly a different supervision terminology, stating that “...services must be provided either by or under the direct personal supervision of the therapist in independent practice...”¹²

The 1999 regulations reflected several revisions related to Part B therapy, mainly to conform to new payment and coverage statutes required in the 1997 BBA.¹³ Also included in the 1999 revisions were changes urged by Congress during the fiscal year 1997 appropriations process regarding independent practices. The House Appropriations Committee Report states that:

“The Committee urges HCFA to modify its regulations to clarify that where a Medicare certified physical or occupational therapist in independent practice engages licensed physical or occupational therapists, it is not necessary for the Medicare certified therapist in independent practice to be on the premises in order for those services to be reimbursed as covered Medicare services.”¹⁴

In response, CMS modified regulations effective 1999 to allow PTs employed by an independent (now termed private) practice PT to furnish and supervise services without the practice’s owner remaining on site. As CMS states in subsequent Federal Register notices, the 1999 regulations intended to then clarify that “direct personal” or, more clearly, “personal” supervision remains in effect regarding other private practice employees furnishing or assisting with therapy— PTAs and aides.¹⁵

¹² MCM 2215 (F) as of October 1, 1981 in Medicare Manual Publication No. 14, Carriers Manual Part 3, Chapter II.

¹³ Changes are discussed in Federal Register vol 63 no 108, June 5, 1998 *Medicare Program: Revisions to Payment Policies under the Physician Fee Schedule for Calendar Year 1999; Proposed Rule*.

¹⁴ 104th Congress Report of the House of Representatives, House Report No. 104-659; *Departments of Labor, Health and Human Services, and Education, And Related Agencies Appropriation Bill, 1997*.

¹⁵ Comment and response sections in Federal Register vol 65 no 137, July 17, 2000 *Medicare Program: Revisions to Payment Policies under the Physician Fee Schedule for Calendar Year 2001; Proposed Rule*; and Federal Register vol 65 no 212, November 1, 2000 *Medicare Program: Revisions to Payment Policies under the Physician Fee Schedule for Calendar Year 2001; Final Rule*.

As expressed in their public comment letters, APTA representatives state that the 1999 regulations reflect a change in policy rather than a clarification of an existing policy regarding PTAs.¹⁶ They refer to the conditions of coverage regulations for therapists in independent practice (prior to 1999), which required “direct supervision”.¹⁷ Further, they refer to Medicare Carriers Manual instructions related to services furnished incident to physician services, where “direct personal” supervision by physicians of “incident to” services is defined as the physician being “...in the office suite and immediately available...” but not necessarily “in the room”.¹⁸

In subsequent Federal Register notices, CMS counters that there is no “incident to” provision in the physical therapy benefit— thus indicating that the definition regarding physician supervision of “incident to” services in physician offices does not apply to PT supervision of PTA services in private PT practices.¹⁹

While conflicting opinions persist regarding the nature of the 1999 regulations, at a minimum it is clear that current Medicare regulations require personal (meaning in the room) supervision of PTAs furnishing services in private practices, and that APTA representatives request in comment letters that direct supervision (meaning on the premises) be required instead.

Medicare requires general supervision of PTAs furnishing services in SNFs, comprehensive outpatient rehabilitation facilities or CORFs, certified rehabilitation agencies, and home health agencies. Regulations explain that general supervision

¹⁶ APTA Letters to the Administrator, January 4, 1999 and September 17, 1999.

¹⁷ 42 CFR 410.60 (a)(3)(ii) in versions prior to 1999.

¹⁸ MCM 2050.1(B) in the Medicare Manual Publication No. 14, Carriers Manual Part 3, Chapter II.

¹⁹ Comment and response section in Federal Register vol 65 no 212, November 1, 2000 *Medicare Program: Revisions to Payment Policies under the Physician Fee Schedule for Calendar Year 2001; Final Rule*.

requires “initial direction and periodic inspection”, but not on-premises or in-room supervision, and PT availability by telecommunication. Direct supervision is required in physician practices.²⁰

State regulations

If states have more stringent PTA supervision regulations than Medicare, then providers must follow state regulations when furnishing services to Medicare beneficiaries. We collected and analyzed states’ statutes and administrative code regarding the practice of physical therapy pertaining to PTA supervision. Below, we review the variety of PTA supervision requirements existing at the state level.

Four essential levels of supervision

While we found that supervision requirements vary across states, terminology and definitions often differ as well. For example, depending on the state, “direct” supervision” can refer to requiring full-time site supervision, periodic on-site supervision, or only telecommunication supervision. Though terminology varies, our content analysis of the regulations indicates that essentially four levels of PTA supervision are used by states. We describe these levels as:

- full time on-site (or on-premises) supervision;
- periodic in-room (or in-sight) supervision, with telecommunication supervision at other times;
- periodic on-site (on-premises, but not necessarily in-room) supervision, with telecommunication supervision at other times; and
- telecommunication supervision at all times.

Overall, eight jurisdictions (seven states and Washington, DC) or 16% require

²⁰ Certified rehabilitation agencies: 42 CFR 485.703; CORFs: 42 CFR 485.60; home health

full-time on-site supervision; another seven states stipulate periodic in-room supervision; 16 states (31%) require periodic on-site supervision; and another 16 states permit telecommunication supervision. Five states (10%) do not stipulate their supervision requirements as clearly as other states. After reviewing all states' codes, we infer that these five permit telecommunication supervision at all times. If the five are included in the telecommunication category, then 21 states (41%) use that level of supervision.

Comparing the state supervision requirements to Medicare supervision definitions, Medicare's direct regulation is equivalent to states' full-time on-site requirement. Medicare's general supervision regulation is equivalent to states' telecommunication supervision requirement. Regulations of states requiring this level of supervision explain that PTs are not required to be on site while PTAs furnish services. However, other areas of these states' physical therapy regulations include language similar to Medicare's "initial direction and periodic inspection" language, requiring that PTs provide initial patient evaluations and all patient re-evaluations.

Under the periodic in-room and periodic on-site levels of supervision used at the state level, some states further specify a minimum frequency of the supervisory visits. Most states requiring periodic in-room supervision expressly stipulate a minimum schedule where the supervising PT personally inspects or views the PTA furnishing services. States indicating periodic on-site supervision do not indicate a personal inspection requirement of PTA services, but rather the immediate, on-site availability of a supervising PT at a minimum schedule. A few states that require only telecommunication supervision also specify a maximum radial distance or time period within which a PT must remain when supervising PTAs.

Supervision requirements also vary by setting. Most states require telecommunication supervision of PTAs furnishing services to home health patients, to those in long-term residential care facilities, and to those in school systems. These

agencies: 42 CFR 409.42 (c); SNFs: § 3132.1

settings are not singled out in states that require telecommunication availability across all settings, but these exceptions are noted in states that apply stricter supervision requirements to other settings.

Across supervision levels, some states establish a maximum number of PTAs that a PT can supervise at one time. Also across supervision levels, some states specify a minimum frequency of patient reevaluations to be performed by a PT. (While the purposes of supervisory visits and patient reevaluations are distinct, discussions with clinicians and state physical therapy board members indicate that in practice the two activities can overlap.)

As discussed in detail below, Table 6 illustrates the PTA supervision standards required in the majority of settings (that is, most inpatient and outpatient providers). For each state, the table includes the supervision terminology or phrase most frequently used in the statute; the actual level of supervision required; maximum distance requirements of supervising PTs (where applicable); maximum ratios of PTAs to PTs; and minimum patient reevaluation requirements. For ease of presentation, licensure and minimum CE requirements, discussed in the prior section, are identified on this table as well. (A PT licensure column is not needed, because all states require PT licensure.) Table 7 provides a summary count of the number of states, by region, regarding the information presented on Table 6.

Full-time on-site

A total of eight jurisdictions require supervising PTs to be on site at all times when PTAs furnish treatment. These include New Jersey, New York, Washington DC, Pennsylvania, West Virginia, North Dakota, Arizona, and Hawaii.²¹ Two other states require this level of supervision in some circumstances— Delaware requires full-time on-

²¹ In the home health setting, New York and North Dakota require periodic on-sight supervision of PTAs, with PT supervisory visits required every six visits or 30 days.

site supervision of PTAs who have less than one year of experience working as PTAs; Nebraska requires this supervision level when PTAs furnish tasks specified in the state's code. Some of the nine states term this as "direct" supervision; others use the term "on-site" supervision.

Periodic in-room

While no states require full-time in-room supervision of PTAs, seven states require that a supervising PT personally inspects or views a PTA furnishing services on a periodic basis. Four states require "regular" or "periodic" supervisory visits but do not define or quantify those terms (Massachusetts, West Virginia, Mississippi, and Illinois). Three states go further by specifying a minimum frequency— Delaware requires supervisory visits by PTs at least every five visits or 21 days; Wisconsin stipulates them at least every 14 days; Tennessee requires the visits at least every 60 days.

Except for West Virginia, states that require periodic in-room supervision specify that when supervising PTs are not physically with the PTA, they may maintain supervision via telecommunication. (On Table 6, these states are indicated with an asterisk (*) in the telecommunication column.) West Virginia, by contrast, requires full-time on-site supervision (as noted above), and additionally requires periodic in-room supervision. Adding to the mixed use of terminology, states use a range of phrases when referring to this level of supervision, including "direct", "on-site", "personal", and "general".

Periodic in-room supervision as required by most states is not similar to Medicare's full-time in-room supervision requirement, given that telecommunication supervision is the requirement otherwise in these states. If PT supervisory visits in these states are, on average, similar to the minimum schedule (rather than more frequent), then a full-time on-site supervision requirement may be stricter than a periodic in-room requirement. However as noted, West Virginia has the strictest statute, requiring both full time on-site and periodic in-room supervision.

Periodic on-site

Sixteen states require periodic on-site supervision. That is, these states require a supervising PT to be periodically on the premises (on site), but compared to states we categorize as “periodic in-room supervision”, these states do not stipulate that the supervising PT must personally observe, on a periodic basis, PTAs as they furnish therapy services. Three states require “regular” or “periodic” supervisory visits on site but do not define those terms (Vermont, Oklahoma, and California). The remaining 13 states that require periodic on-site supervision specify a minimum frequency of supervisory visits by PTs.

Of the 13 that specify a minimum frequency of on-site supervision, the most commonly required schedules are on-site supervision every 4 to 6 patient visits or 30 days. Six states require this frequency (Rhode Island, Michigan, South Dakota, Utah, Wyoming, and Montana). Two states require on-site supervision on a weekly and a biweekly basis (Kansas and Alaska, respectively). Two others require on-site supervision every 10 visits and 15 visits (Maryland and Nebraska, respectively). The strictest frequency required of the 16 states is that of Georgia and Louisiana. These two states require that supervising PTs remain on site during 50% of the workweek or 50% of PTA treatment hours. Finally, Florida requires on-site supervision of patients who are in the “acute phase” of illness or injury, and also of hospital inpatients.

All states (except Nebraska) that require periodic on-site supervision specify that when supervising PTs are not on site, they may maintain telecommunication supervision. (On Table 6, these states are indicated with an asterisk (*) in the telecommunication column.) As noted above, Nebraska requires full-time on-site supervision during PTA provision of some tasks, however that state’s default level is periodic on-site supervision rather than telecommunication supervision. The most common regulatory language used by states when terming this type of supervision is “on-site” or “general” supervision.

Telecommunication

As described above, a total of 21 states require telecommunication supervision of PTAs accompanied by on-site or in-room supervision required at “regular” (and typically specified) intervals.

Another 16 states simply require telecommunication contact at all times as the form of PTA supervision. On Table 6, these states are indicated with an “X” (rather than an asterisk) in the telecommunication column. Some states expressly stipulate that supervising PTs must be immediately available by telecommunication at all times that PTAs are furnishing services, while other states more vaguely note that a supervising PT must be available to the PTA. Finally, an additional five states’ regulations regarding supervision requirements are, comparatively, quite vague or short. While we presume that these states require that supervising PTs remain available at least by telecommunication, on Tables 6 and 7 these states are located in the “supervision level not specified” column.

In contrast to some of the less specific telecommunication supervision regulations, four states additionally stipulate that under this type of supervision PTs must remain geographically proximate when PTAs furnish services. Louisiana specifies a 25 mile or 30 minute limit; Tennessee has a 60 mile or 1 hour limit; and New Mexico has a 100-mile limit. Florida requires PTs to remain “in the same geographic location” as the PTA furnishing services.

Many states’ regulations do not clearly specify a term when requiring that supervising PTs remain available, or available by telecommunication. Among those that do, often the term “indirect” or “general” supervision is used. Adding to the mixed use of terms, however, two states term this type of supervision as “direct”.

Maximum ratio of PTAs to PTs

In addition to their supervision-level requirements, two-thirds of all states (33)

have established a maximum number of PTAs that a PT can supervise at one time. Of the 33 states, 25 establish ratios strictly between PTAs and PTs; the remaining eight states include aides with PTAs in their ratios. On average, states' ratios are slightly higher when aides are included (2.75 PTAs and aides to 1 PT, compared to 2.52 PTAs to 1 PT). While the ratios in both groups of states range from 2:1 to 4:1, the most commonly used ratio among states with a strict PTA to PT limit is 2:1; the most frequently used ratio among states that include aides is 3:1. In most states, the maximum ratio is stipulated specifically regarding supervision, however four states (Colorado, California, Idaho, and Washington) add further that the overall number of PTAs employed by the facility or therapy practice cannot exceed the specified ratio.

States with maximum PTA to PT ratios span the four levels of supervision (and the fifth, "non specified" level) and also are geographically dispersed, indicating that there is not a clear pattern related to supervision level or geographic region between those states with and without supervision ratios. There appears to be correlation, however, between use of a maximum supervision ratio, lower state PTA rates, and lower state PTA to PT ratios. The average rate of PTAs per 100,000 population is significantly lower in states with supervision ratios (11.3 PTA rate versus 16.3 PTA rate in states with and without supervision ratios, respectively; t-test P value = .04). The PTA to PT ratio is 0.28 on average in states with supervision ratios, compared to 0.36 on average in states without them (t-test P value = .06). The average PT rate is lower in states with supervision ratios as well, although not significantly lower (43.3 PT rate on average in states with maximum ratios, versus 37.6 PT rate on average in states without ratios, t-test P value = .12).²²

Minimum required patient reevaluations

After conducting initial patient evaluations and designing treatment plans, PTs periodically reevaluate patients and make adjustments as necessary to the patients'

²² Calculations include states with PTA to PT ratios and those with PTA and aide to PT ratios.

treatment plans. Like initial evaluations and treatment planning, reevaluations are non-delegable and always are to be performed by PTs. PT reevaluations of patients are distinct from PT supervisory visits of PTAs treating patients. Both activities do, however, represent a level of interaction between PTs and patients, in addition to PTAs' interactions with patients.²³

Our analysis of state regulations indicates that nearly three-quarters of states (37) stipulate the performance (usually with a minimum specified frequency) of reevaluations, periodic supervisory visits (as described above), or both. Similar numbers of states require either one or both— 14 stipulate only reevaluations; 11 stipulate only periodic supervisory visits; and 12 stipulate both reevaluations and periodic supervisory visits. The 14 specifying only reevaluations permit telecommunication supervision at all times, while the 11 stipulating only supervisory visits and the 12 stipulating both activities are states that require periodic on-site or in-room supervision. Interestingly, none of the 8 jurisdictions (7 states and Washington, D.C.) that require full-time on-site supervision stipulate reevaluations.

While the 14 states that stipulate only reevaluations require simply telecommunication supervision, 12 of these 14 specify a minimum required frequency for PT reevaluations. Seven of these states require reevaluations at least every 30 days (or every 10 to 20 visits, depending on the state); two require reevaluations every 14 days; two require them every five visits; and one requires them every 8 visits or 60 days. The remaining two states stipulate “periodic” reevaluations.

Of the 12 states that stipulate both reevaluations and periodic supervisory visits, six of them require simply a “periodic” reevaluation or supervisory visit, and then specify a minimum required frequency for the other activity. (Four of these six states require

²³ While the purposes of reevaluations and supervisory visits are distinct, anecdotes indicate that in practice the two activities can overlap. For example, Maryland recently eliminated its minimum required reevaluation requirements due to continued confusion regarding its use of both reevaluation and supervisory visit minimum requirements (Lescher, 2002).

“periodic” supervisory visits and then specify a minimum reevaluation schedule.) Three of the 12 states call for reevaluations to be conducted during the periodic supervisory visit, while the remaining three states have different minimum schedules for each activity.

Model practice act and position statements

The APTA House of Delegates has produced position statements regarding several aspects of the practice of physical therapy, and the FSBPT (1999) has developed a model practice act, which is used by states in revising their practice acts. Given the impact of organizational position statements and the interactive and iterative process by which states develop and revise their regulations over time, it is useful to summarize the supervision position statement and supervision component of the model act.

The current APTA position statement regarding supervision of PTAs (as amended in 2000) states that PTAs “may perform selected physical therapy interventions under the direction and at least general supervision of the physical therapist.” Under general supervision, the statement explains that the supervising PT is “available at least by telecommunications”. Prior versions of the APTA position statement did not specify a level of supervision. When supervising PTAs in any off site setting, the position statement also specifies that at least monthly supervisory visits are to be made.²⁴

The model practice act presumes general supervision by default, but does not specify the term. The supervision paragraph in the model practice act states:

“A physical therapist assistant shall work under a physical therapist’s supervision. A physical therapist assistant may document care provided without the co-signature of the supervising physical therapist. [Any further limitations on

²⁴ APTA Position HOD 06-00-16-27 *Direction and Supervision of the Physical Therapist Assistant*, available at apta.org/pt_practice/patientclient_management/use_of_personel_/supervision_pta . Prior version is HOD 06-99-07-11.

supervision of the physical therapist assistant should be specified here and/or clarified in the rules.]” (FSBPT, 1999).

Discussion accompanying the model act explains that the model language assumes that the PTA “is authorized under the practice act to work in a off site setting and under the general supervision” of a PT, and notes that any variation required by the state would be specified in the paragraph. In its guidelines for states’ conforming regulations, the FSBPT document adds that where off site supervision is allowed,

“...further clarification in rules should specify restrictions or limitations based on the practice setting, the acuity of the patient populations, and the types of diagnoses. The method of communication and how often it occurs between the supervising physical therapist and the physical therapist assistant should be included in the rules.”

FSBPT representatives reiterated that although PTA supervision and licensure regulations vary by setting and by state, ultimately PTs in all states are professionally and legally responsible for all care rendered under their license. This care includes services furnished by PTAs under their supervision.

Discussion

Stakeholder discussions

In our discussions with clinicians and representatives of providers and related groups, many noted that Medicare regulations cite quality assurance and patient safety as the basis for requiring a stricter level of PTA supervision in private practices than in facilities. Some stakeholders speculated that a distinction was drawn between facilities and private practices because of the presence of other clinical personnel in facilities. A

few also speculated that the looser supervision regulation for facilities is related to the oversight provided by the periodic state survey and certification process (undergone by facilities). Some also noted that the patient assessment instruments required relatively recently by Medicare in the SNF, inpatient rehabilitation, and home health settings yield patient and service information—and thus review and oversight opportunities—not available regarding therapy furnished in either private practice or other ambulatory settings. The safeguards in place in the private practice setting, by contrast, have been the stricter supervision requirement and the dollar-based coverage limits (which, many say, effectively limited the patient mix served by independent or private practices).

Countering the patient safeguard argument, many stakeholders believed that PTA supervision is indirectly related, if at all, to quality assurance. These conversations often intertwined with discussions about case-mix and the desire for fairness or consistency of regulations across ambulatory settings. Most generally felt that case-mix varies little across certified rehabilitation agencies, private practices, and some hospital outpatient facilities—particularly outpatient satellites created or purchased by hospitals. (Some hospital-based clinicians mentioned that their main campus outpatient facilities have a sicker case-mix.) There was less consensus regarding the case-mix of home health patients receiving therapy services relative to outpatient therapy patients. Some argued that most home health patients represent a sicker case-mix by virtue of their homebound status; others stated that some home health patients have chronic care needs, but are more medically stable than some outpatients are. All stakeholders, however, reiterated that regardless of case-mix or setting, the PT is responsible for determining whether a patient’s medical condition and rehabilitation needs indicate that a PTA can appropriately and safely furnish therapy services, under the direction and supervision of the PT, to the patient.

Several stakeholders described the type of regulatory and other factors that most influence the use of PTAs by facilities and practices. In terms of regulation, many commented that state reevaluation requirements, periodic supervision visit requirements,

and maximum PTA to PT ratios affect a facility's or practices' utilization of PTAs more than the actual supervision level required by states. Non-regulatory factors affecting PTA utilization include the length of a patient's therapy episode, volume of therapy patients, and PTA supply.

Regarding episode length, many stated that it is less cost-efficient for facilities or practices to use PTAs to treat patients who undergo relatively short therapy episodes. They explained that in these cases, few treatment visits occur between initial evaluation, reevaluation, and discharge, and thus it becomes more cost-efficient to rely on PTs to furnish both the evaluative tasks and the treatment implementation tasks for such patients. In terms of volume, some explained that facilities and practices with a low volume of therapy patients are consequently less likely to employ PTAs. By contrast, higher volume facilities and practices have a sufficient number of patients to permit them to fully schedule a PT's time for evaluative-oriented patient activities. These larger providers then can rely on PTAs to furnish the bulk of the specific therapy interventions. Many commented that local PTA supply is a significant factor affecting their use of PTAs, and some discussants commented that they would employ more PTAs if they were available in their area. Participants further explained that the PTA supply is a much more localized workforce than the PT supply, and that a larger area's average supply statistic can mask pockets of over- or under-supply at the more local level. Some added that PTA supply is directly related to proximity to PTA education programs.

Individuals also commented more broadly and historically about PTA utilization. Some noted that the supply and use of PTAs increased steadily in the 1990s, due to PT supply shortages and cost-containment pressure applied by private-sector payers. Others commented that the complexity of tasks with which PTAs are involved has increased over time as well. Some recalled that it was during this expanded utilization period that many states augmented their physical therapy practice regulations with maximum PTA to PT ratios and reevaluation requirements. FSBPT and CARF representatives added further that regulatory violations regarding PTA utilization (although rare) typically entail

PTA involvement in reevaluations and, perhaps relatedly, entail PTs not following states' minimum reevaluation schedules. Most stated that the extent to which PTAs are used instead of PTs varies both across and within settings. Some added that at root, any overutilization of PTAs is correlated mostly with a facility or practice that creates an overly aggressive environment regarding cost-containment or revenue growth.

In our discussions, those most familiar with private practices relayed that the operational reactions by private practices following the 1999 regulations regarding personal supervision have varied, based on three main factors: a practice's physical or structural layout, its Medicare patient volume, and its Medicare volume relative to its total patient volume. Commenters stated that practices with relatively open physical designs are affected less than others. Practices with Medicare patient loads that are small in number (in absolute and relative terms) also are affected less than others. However, practices with large Medicare caseloads and physical layouts that do not accommodate in-room or line-of-sight supervision typically have reacted by reducing their number of PTA employees. Participants added that some practices with very small Medicare caseloads might have stopped accepting Medicare patients. Overall, participants familiar with private practices stated or implied that private practices do not use PTAs to treat Medicare patients as frequently as they would, absent the personal supervision requirement.

In any event, most stakeholders whom we interviewed were not in favor of a personal supervision requirement—applied to private practices or any other setting. Several issues with the requirement were raised. Some were against a personal supervision requirement in private practices because it is a stricter requirement than states' PTA supervision regulations and is not consistent with Medicare regulations on PTA supervision in other settings. Some noted specifically that regulations should be applied consistently in particular to private practices and certified rehabilitation agencies, given the similarities of these settings relative to other settings. Some reiterated the opinion that supervision is not the key to ensuring patient safety. Some stated that a

personal supervision requirement may slow access to therapy services in rural areas or other localized areas with PT shortages (for example, some commented that PTAs are in greater supply than PTs in some inner city areas).

Another issue raised during our discussions is that the requirement creates tensions between patient privacy and business efficiency. For example, compliance with a personal supervision regulation requires that a PTA open a curtain or door to a treatment area (to allow “line of sight” by the supervising PT) when patient privacy needs may indicate that the curtain or door should remain shut. Ensuring privacy and compliance, however, suggests the presence of both a PT and a PTA in the treatment room (or solely a PT in the room)—when otherwise the services of the PTA would be sufficient. Finally, some felt the requirement sends a message of distrust and non-professionalism to PTAs.

Our conversations with stakeholders suggest two main themes of concern. Primarily, many state that a personal supervision requirement regarding PTAs is unnecessary and overly burdensome in any setting. In addition, many state that regulations should be more consistent across settings, particularly across private practices and certified rehabilitation agencies.

PTA supervision requirements and payment/coverage policies

In requesting analyses of PTA supervision, policymakers also queried whether any relationships and implications exist between supervision requirements and Medicare payment and coverage policies.

Part B therapy furnished by private therapist practices (as well as by physician practices) has been paid under the physician fee schedule since 1992. Through 1998, Part B therapy payments to facilities were based on their costs as submitted to Medicare. As of 1999, the 1997 BBA required that facilities furnishing Part B therapy be paid under the

physician fee schedule as well. (Facilities were paid on a cost-basis in 1998, with a 10% payment reduction for savings.)

Therapy furnished by private practice therapists has been subject to annual, per beneficiary coverage limits since 1974. The 1997 BBA required, effective 1999, the coverage limits to be extended to all Part B therapy providers except hospitals. The caps are not currently implemented; Congress placed a moratorium on them for 2000 through 2002. Several therapy organizations have requested that Congress extend the moratorium at least through 2003 (HCPRO, 2002a; HCPRO, 2002b). In addition, a bill was proposed in spring 2001 that would simply eliminate the caps, rather than extend the moratorium. The bill's sponsors state that repealing the caps would cost about \$500 million over five years, according to a PricewaterhouseCoopers cost estimate (CCH, 2002). Compared to Congressional cost estimates, the PricewaterhouseCoopers estimate is conservative. CBO estimated that the one-year cost of the moratorium during 2002 is \$200 million (CBO, 2002).

Prior research by Maxwell and Baseggio (2001) shows that aggregate and per patient Medicare Part B therapy expenditures fell substantially in 1999, due to the across-the-board implementation of the fee schedule as well as due to the coverage limits. Nominal aggregate expenditures declined from \$2.2 billion in 1998 to \$1.4 billion in 1999; per patient annual payments fell from \$709 to \$480. In 2000—the first year of the coverage limit moratorium—expenditures climbed back up to a level between 1998's and 1999's spending levels. Aggregate payments rose to about \$2.0 billion; per patient spending rose to \$642.

To the extent that Medicare PTA supervision requirements affect a provider's therapy staff mix and overall costs, supervision requirements would impact Medicare spending (and a dollar-based coverage policy) particularly under a *cost-based* reimbursement policy. Under a *fee schedule* payment policy, PTA supervision requirements would impact Medicare expenditures and coverage limits if a provider's

therapy staff mix and utilization affects the number of therapy services furnished per patient. We have not found prior research studies analyzing the effect of PTA utilization relative to PT utilization on the number of therapy services consumed per patient. Anecdotally, some clinicians commented to us that they believed PTs often can obtain a given patient outcome earlier than PTAs because of PTs' additional analytic and evaluative training. Others commented that their experiences regarding this issue were too diverse to generalize.

The incentives of a fee schedule payment policy suggest that a supervision requirement, to the extent that it affects staff mix, clearly affect costs from the *provider* perspective. Under a cost-based reimbursement policy, a provider generally can pass along to a payer the higher costs associated on average with using both PTAs and in-room or in-sight supervising PTs to furnish all services, rather than PTAs to furnish most services. Similarly, the higher costs of employing only PTs to furnish all services, instead of using PTAs to furnish most services, could be recouped as well. Under a fee schedule payment policy, however, providers have an incentive to utilize the lowest-cost staff that can furnish services.

The private practice participants in our stakeholder discussions commented that their use of PTAs remains somewhat cost-efficient, from their perspective, when treating Medicare patients in open or gym-like areas (where PTs can maintain in-room or in-sight supervision over multiple PTAs and patients). However, in circumstances where privacy needs dictate that Medicare patients receive services in individual rooms, participants stated that typically it is not cost-efficient from their perspective to use the combination of a PTA and an in-room supervising PT. It is more cost-efficient to rely solely on a PT to furnish these services. And if supervision regulations permitted, a provider's cost savings would be greatest when using PTAs to furnish these services.

The efficiency incentive of a fee schedule is compatible with the philosophy underlying the resource-based foundation of the Medicare physician fee schedule. The

resource-based fee schedule originally was designed so as to pay for a service based on the work effort and practice expense necessary to perform the service, rather than on the type of provider furnishing the service. Under this principle, the current physician fee schedule rate for a given physical therapy service (such as, for example, range of motion exercises) would be appropriate— regardless of the type of staff used and supervision level— only if the therapy staff mix and supervision patterns in existence today were reflected in the original development of the work effort and practice expense components of the fee schedule rates for physical therapy services.

However, current staffing or supervision patterns may vary substantially from the patterns in place when the work effort and practice expense components of the fee schedule were developed. Specifically, if today's relatively expanded role of PT assistants in providing therapy services was not reflected in the original development of the work effort and practice expense components of therapy services, then the work effort components, for example, would be overvalued for a service when performed by a PT assistant. Similarly, the practice expense component may undervalue the supervision activities of a PT. In this case, reexaminations of such components would be warranted analytically.

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